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10/517,466

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EXAMINER

NGUYEN, SIMON

ART UNIT

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/517,466 | Applicant(s) VERMA ET AL. | |
| | Examiner SIMON D. NGUYEN | Art Unit 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/12/09 have been fully considered but they are not persuasive. In Remarks, Applicant stated that Mustajarvi fails to teach the detection of user movement by comparing routing area identifiers.

Reviewing carefully the Mustajarvi's reference, Examiner disagrees for the following reasons: Mustajarvi discloses that the radio network (PLMN) transmits information to the MS so that it can detect when it enters a new cell or a new routing area. The MS detects that it has entered a new cell by comparing the routing area identifier stored in its MM context with the routing area identifier (a new cell or a new network) received from the network (column 4 lines 17-34, column 9 lines 14-20), wherein the routing area identifier stored in its MM context is the routing area identifier of an old cell updated prior to enter the new cell (column 4 lines 17-62, column 9 line 22-32), wherein the updated routing area happens when the MS enters a new routing area (column 9 lines 44-46) by identifying the routing area identifier of the old routing area and the new routing identifier of the new routing area (column 10 line 2-3), wherein the updated routing area identifier when the MS moves to a new cell or location (column 9 line 3 to column 10 line 67) which means that the system comparing the old routing area identifier with the new routing area identifier to determine the movement of the MS (or the user movement).

Furthermore, in column 9 line 43 to column 10 line 67, Mustajarvi discloses the location update of the MS by comparing the old routing area identifier with the new routing area identifier, wherein the location update of the MS is considered as the detection of user movement.

In conclusion, using the routing area identifiers in detecting the movement of a mobile station as taught by Mustajarvi can obviously be implemented in the system of Katz in order to detect the movement of a mobile station from a PLMN network to a WLAN network is obvious to those skilled in the art since both teach the same field of invention. Therefore, the previous Office Action stands.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz et al. (US 2006/0291455 A1) in view of Mustajarvi et al. (6,661,782).

Regarding claim 1, Katz discloses an interface for connecting networks (abstract), comprising: an interworking function provided between a WLAN and a PLMN wherein the interworking function comprising a dual-protocol stack which interfaces the WLAN protocols and PLMN protocols (figs. 6-115, 13-16) to have more available bandwidths (paragraphs 298, 304). It should be noted that Katz discloses a handoff as a mobile

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moves between the WLAN and PMLN networks (figs. 4b, 7, pars. 68, 318, 375, 536).

However, Katz fails to teach detecting the movement of a mobile station based on routing area identifiers.

Mustajarvi discloses method and apparatus for routing area updating of a mobile station between two mobile communication networks (abstract, fig.1), wherein the networks comprises means for detecting the mobile station movement between the networks by comparing a first routing area identifier associated with a first area network and a second routing area identifier associated with a second area network (abstract, column 4 lines 18-34, column 9 lines 4-21, 43-67, column 10 lines 1-26). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the RAIs of the first and second networks at taught by Mustajarvi in the WLAN and PMLN of Katz, respectively. The reason for combining the teachings of Katz and Mustajarvi is that it is potentially improved in keeping track the movement of the packet transmission.

Regarding claim 2, Katz further discloses wherein the interworking function (relay including WAN protocol and PLMN protocol is within WLAN as the interworking function) present within the WLAN (figs. 8-11).

Regarding claim 3, Katz further discloses wherein the PLMN includes one of a UMTS or GPRS system (paragraphs 31, 631).

Regarding claim 4, Katz further discloses wherein the interworking function communicates between the WLAN and the PLMN through a Gn interface (figs. 8-11, 13-16, paragraphs 268, 278, 280, 284-289).

Regarding claim 5, Katz further discloses wherein the seamless communications include protocol compatibility between the WLAN and the PLMN (figs.8-11, 13-16).

Regarding claim 6, Katz further discloses wherein the interworking function functions as a logical serving general packet radio service (GPRS) support node (SGSN) (figs. 10,12-14).

Regarding claim 7, Katz further discloses wherein the interworking function is viewed by the PLMN as a logical SGSN within its own network (figs. 8,10, 12-14).

Regarding claim 8, Katz further discloses wherein the interworking function is viewed as a node within the WLAN by the WLAN when receiving information from the PLMN (figs.8-11, 13-16).

Regarding claim 9, Katz further discloses wherein the interworking function is coupled to a gateway general packet radio service (GPRS) support node (GGSN) via a tunnel (paragraphs 291, 333, 518), which means that Katz teach the tunnel is GTP tunnel.

Regarding claims 10-11, Katz further discloses protocol plane for user and for control (figs.8-9, paragraphs 285,288, 289).

Regarding claim 12, Katz further discloses wherein the PLMN includes SM/GMM (session management (SM)/GPRS mobility management (GMM)) procedures, which are reused in the WLAN due to the use of an adaptation layer in a mobile dual-protocol stack and in the IWF to WLAN interface to mimic the functionality of an RRC (radio resource control) protocol sublayer (figs.8-16, paragraphs 76-80, 205, 307, 318, 325, 197-204, 248).

Regarding claim 13, Katz further disclose wherein the WLAN works with any serving general packet radio service (GPRS) or code division multiple access (CDMA) system (paragraphs 365, 631, 635).

Regarding claim 14, this claim is rejected for the same reason as set forth in claims 1, 3.

Regarding claims 15-16, Katz further discloses wherein the interworking function communicates with a serving general packet radio service (GPRS) support node (SGSN) of the UMTS network through a Gn interface, seamless interactions by ensuring protocol compatibility ((figs. 8-11, 13-16, paragraphs 268, 278, 280, 284-289),

. Regarding claim 17, this claim is rejected for the same reason as set forth in claim 6.

Regarding claim 18, Katz further discloses the step of viewing the interworking function as a logical SGSN from a same PLMN (figs.8-11, 13).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 5, 2009

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/SIMON D NGUYEN/

Primary Examiner, Art Unit 2618